

MICROHABITATS OF SEASHORE *BLEDIUS*
(COLEOPTERA: STAPHYLINIDAE)

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ABSTRACT

Microhabitats indicate that *Bledius fenyesei* Bernhauer and Schubert and *B. monstratus* Casey are distinct species.

Herman's (1972, 1976) very excellent revision of the genus *Bledius* treats most of the species in an admirably conservative manner, thus making species identification possible in the Nearctic Region for the first time, while discussions of specific variation clarify doubtful cases.

In 1972 (p. 116), Herman said, "Adequate taxonomic conclusions for *Bledius* are possible only after studying long series of specimens for which microhabitat data are known. Often characters separating species of *Bledius* are slight, variable, and difficult to describe. As large samples and knowledge of microhabitats of phenetically similar, sympatric species are obtained, the consistency of slight anatomical differences become more evident".

In considering *B. fenyesei* and *B. monstratus*, Herman treated them as 2 distinct species with considerable hesitancy. I will attempt to show that the 2 species are distinct by comparing their microhabitats.

Herman (1976, p. 76) said, "Another problem exists to whether *monstratus* and *Bledius fenyesei* actually represent two species. The two are similar in all respects except in length of the elytra and pronotum. They represent one polymorphic species or two similar species, *monstratus* being more variable. I have opted for the latter possibility for reasons given below." On p. 143 he said, "In support of continued recognition of two species is not only the lack of intergrades, but more importantly, the complete anatomical separation even in part of the range of *monstratus* where the metathoracic wings and elytra are longest. A practical basis for maintaining recognition of two taxa is the differential ecological and biological data that might continue to be collected with two named entities, but not with one. In this way, the problem can continue to be considered."

The range of *B. fenyesei* is from somewhere in Baja California to near Point Conception, California. Herman mentions 5 specimens taken farther north within the range of *B. monstratus*. These insects are strong flyers. It is possible that these few specimens were accidental individuals flying out of their own range on dispersal flights. It is also possible that small colonies could become temporarily founded in the north, but eventually die out because of unsuitable environmental conditions. *B. monstratus* ranges from north of Point Conception, California, to British Columbia. I have seen no specimens of it from south of Point Conception. Herman says that fully winged forms are from the far north and brachypterous individuals from the southern part of the range. Thus, it would be unlikely that individuals of this species could be carried by the prevailing northwest winds south of Point Conception.

In a recent extensive year-around survey of seashore Staphylinidae in Santa Barbara County, California, R. E. Orth collected many *B. fenyesei*, but no *B. monstratus*. My years of collecting on the southern California beaches have produced the same results.

During my extensive collecting of seashore beetles, I have noticed an invariable distinction in the microhabitat preferred by each of these species.

B. fenyesei is not encountered on the seashore as often as some other staphylinids (i.e., *Tarphiota geniculata* Mäklin, *Aleochara sulcicollis* Mannerheim, *Cafius canescens* Mäklin, and *C. seminitens* Horn, any of which may be found in any clump of damp wrack). *B. fenyesei* is found almost exclusively in moderately massive accumulations of wrack which have been on the beach long enough to become well decayed. With experience collecting on the beach, it is often possible to forecast finding this species by the appearance of the wrack from a distance. If wrack has been wetted by a recent tide, there will be no *B. fenyesei*. When present, it often occurs in large numbers, sometimes hundreds of individuals in a single clump of decaying seaweed. Larvae are never with it, contrary to the usual condition with other members of the genus. The larva of this species is unknown, but it has been assumed that the species breeds deep in the sand and that the adults are attracted to wrack by the products of decay (Moore 1973, Moore and Legner 1974).

B. monstratus, on the other hand, does not occur in numbers in much decayed wrack. On beaches where it is present (i.e. Cayucos, Carmel, Arcata), it can usually be found under small deposits of wrack which mark the upper reach of the last high tide. These will be deposits of fresh wet seaweed, often in small clumps. It can be common in such situations, usually in company with *Ponamalota californica* Casey which may also be common. This microhabitat seems so distinct from that of *B. fenyesei* that it seems very unlikely that the 2 forms can be anything but separate non-interbreeding taxa. Herman was correct in not uniting the 2 as a single polymorphic species. As pointed out by Herman, although the 2 species are similar in most characters except the relative length of the pronotum and elytra, there is no difficulty in identifying individual specimens.

LITERATURE CITED

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LITERATURE NOTICE

The latest number of *Folia Entomologica Mexicana* (1977, No. 37) contains 4 articles of note: *H. E. Hinton*, "Mimicry provides information about the perceptual capacities of predators", p. 19-29; *P. Reyes-Castillo & G. Quintero*, "The species of *Oileus* Kaup and their distribution (Coleoptera: Passalidae)", p. 31-41; *G. Halffter & V. Halffter*, "Notas sobre *Eurysternus* (Coleoptera, Scarabaeidae, Scarabaeinae)", p. 42-86; and *U. R. Martins*, "In memoriam. Hans Reichardt Filho", p. 87-88.